What Is Claimed Is:

1. An ordnance transfer line system, comprising:

a Rapid Deflagration Cord (RDC) extending from a first end and a second end of a transfer line;

a first metal tubing hermetically encapsulating said RDC from said first end to said second end of said transfer line;

a first loaded end fitting disposed at said first end of said transfer line; and

a second loaded end fitting disposed at said second end of said transfer line;

a first transfer assembly having a socket to receive said first loaded end fitting;

a second transfer assembly having a socket to receive said second loaded end fitting;

a first ferrule connecting said first end of said transfer line to said first loaded end fitting and connecting said first loaded end fitting to said socket in said first transfer assembly; and

a second ferrule connecting said second end of said transfer line to said second loaded end fitting and connecting said second loaded end fitting to said socket in said second transfer assembly, said first ferrule being welded to said first metal tubing at said first end of said transfer line and said second ferrule being welded to first metal tubing at said second end of said transfer line.

2. The system of claim 1, said welding forms a hermetic seal between said first end of said transfer line and said first loaded end fitting and said second end of said transfer line and said second

end fitting preventing moisture from entering said system prior to functioning and preventing gaseous byproducts from escaping from said system during and after functioning.

3. The system of claim 1, said first and said second ferrule each comprising an annular groove that accommodates an annular seal that forms a hermetic seal preventing gaseous byproducts from escaping from said system during and after functioning when said first and said second end fittings are installed in said first and second transfer assemblies, respectively.

4. The system of claim 3, each annular seal comprising Silicone rubber.

5. The system of claim 1, each respective ferrule being crimped to respective ends of said first metal tubing firmly pinching respective ends of said RDC into respective loaded end fittings.

6. The system of claim 1, said first ferrule having a booster charge stored therein, said first ferrule being laser beam welded to a closure cup that faces away from said booster charge, said laser beam welding allowing stainless steel from said closure cup and said ferrule to mix and to serve as a donor of steel to said laser beam weld providing a strong attachment between said closure cup and said first ferrule.

7. The system of claim 1, said first ferrule having a booster charge stored therein, said first ferrule being welded to a closure cup, a bottom of said closure cup being coined wherein portions

of said bottom surface have a thickness less than 0.0025 inches where other portions of said bottom surface having a thickness of at least 0.003 inches.

8. The system of claim 1, said first metal tubing being stainless steel and having an inner diameter of 0.062 inches and an outer diameter of 0.094 inches allowing said first metal tubing to be semi flexible enabling said first end fitting and said second end fitting to be fitted into said first and said second transfer assemblies when said first and said second assemblies are fixed and not perfectly aligned.

9. The system of claim 1, said RDC having a diameter of 0.050 inches.

10. The system of claim 9, said RDC comprising:

$Cs_2B_{12}H_{12}$ fuel for a charge booster and KNO_3 oxidizer to serve as Rapid Deflagration Material (RDM); and

a metal encasement surrounding said RDM, said metal encasement having a diameter of 0.050 inches.

11. The system of claim 1, each ferrule having a spit hole perforating each ferrule along a central axis, each spit hole being bounded on a first side by said RDC and being bounded on a second end and opposite end by a booster charge disposed in each ferrule.

12. An assembly having a flexible transfer line, said assembly comprising:

a Rapid Deflagration Cord (RDC) extending from a first end and a second end of a transfer line;

a first metal tubing hermetically encapsulating an entire length of said RDC, said first metal tubing being of the shape of a coil in a portion of said transfer line between said first end and said second end of said transfer line;

a first loaded end fitting disposed at said first end of said transfer line;

a second loaded end fitting disposed at said second end of said transfer line;

a pair of second metal tubings, each one encapsulating respective portions of said first end and said second end respectively of said transfer line, said first end and said second end being defined as portions of said first metal tubing between said first and said second end fitting respectively and said coiled portion of said transfer line.

13. The assembly of claim 12, said first and said second end fittings each comprising a ferrule that comprises a socket for receiving respective ones of said pair of second metal tubings, each ferrule being welded to respective ones of said pair of second metal tubings.

14. The assembly of claim 13, said welding between respective ones of said pair of second metal tubings and said first metal tubing and weldings between a closure cup and each respective ferrules creating a hermetic seal for said system.

15. The assembly of claim 13, each ferrule having an annular groove for accommodating a Silicone rubber O-ring providing a hermetic seal between said end fittings and respective ones of a pair of transfer assemblies, each end fitting being disposed in respective transfer assemblies resulting in a hermetic seal between each end fitting and each respective ones of a pair of transfer assemblies that receive respective ones of said first loaded end fitting and said second loaded end fitting preventing the escape of gaseous byproducts upon functioning of said assembly.

16. The assembly of claim 15, said first loaded end fitting comprising a chemical selected from the group of $Cs_2B_{12}H_{12}$ fuel for a charge booster with KNO_3 oxidizer, Hexa Nitro Stilebene (HNS) and percussion primer end fittings.

17. The assembly of claim 16, said second loaded end fitting comprising a chemical selected from the group of $Cs_2B_{12}H_{12}$ fuel for a charge booster with KNO_3 oxidizer and Hexa Nitro Stilebene (HNS).

18. The assembly of claim 12, said first metal tubing being stainless steel and having an inner diameter of 0.062 inches and an outer diameter of 0.094 inches allowing said coiled section to flex in excess of 50,000 times without breaching said first metal tubing.

19. An energy transfer line assembly used in separation applications, said assembly comprising:

a transfer line having a first end and a second end, said transfer line comprising a RDC surrounded by a metal tubing;

a pair of loaded end fittings being disposed at respective ones of said first and said second ends of said transfer line, each end fitting comprising a stainless steel ferrule attached to said ends of said transfer line respectively;

a pair of transfer manifolds accommodating respective ones of said pair of end fittings, said ferrule in said first end fitting being welded to said metal tubing at said first end of said transfer line and said ferrule in said second fitting being glued to said metal tubing at said second end of said transfer line, said second end fitting comprising HNS.

20. The assembly of claim 19, said ferrule in said second end fitting further comprising a first space in said ferrule adjacent to said second end of said transfer line, said first space comprising $Cs_2B_{12}H_{12}$ fuel for a charge booster with KNO_3 oxidizer used to produce enough gaseous byproducts that forces said ferrule to separate from said second end of said transfer line upon functioning.

21. The assembly of claim 20, further comprising a closure cup welded to said ferrule in said second end fitting.

22. The assembly of claim 21, said closure cup comprising a Lead Azide booster and HNS detonation material, a rim of said closure cup being welded to said ferrule, said second end fitting further comprising a retainer surrounding and welded to said second end fitting.

23. An energy transfer line system, comprising:

a Rapid Deflagration Cord (RDC) extending from a first end and a second end of a transfer line;

a first metal tubing hermetically encapsulating said RDC from said first end to said second end of said transfer line;

a first loaded end fitting disposed at said first end of said transfer line;

a second loaded end fitting disposed at said second end of said transfer line;

a first transfer manifold having a socket to accommodate said first loaded end fitting;

a second transfer manifold having a socket to accommodate said second loaded end fitting; and

a first ferrule connecting said first end of said transfer line to said first loaded end fitting and connecting said first loaded end fitting to said socket in said first transfer manifold, said first ferrule having an annular groove that accommodates an annular sealant that provides a hermetic seal between said first transfer manifold and said first loaded end fitting, said annular sealant preventing the escape of gaseous byproducts upon functioning of said first end fitting.

24. The system of claim 23, said sealant comprising Silicone rubber.

25. The system of claim 24, further comprising a second ferrule connecting said second end of said transfer line to said second loaded end fitting, said second ferrule having an annular groove

that accommodates a Silicone rubber O-ring that provides a hermetic seal between said second transfer manifold and said second loaded end fitting.

26. The system of claim 25, said second ferrule being welded to a rim of a closure cup.

27. The system of claim 26, said rim of said closure cup of said second ferrule extending away from a booster charge disposed on an opposite side of a bottom of said cup away from said rim.

28. The system of claim 26, said closure cup containing a detonating charge stored within.

29. The system of claim 25, said first ferrule being welded to said first end of said first metal tubing of said transfer line providing a hermetic seal protecting the RDC and charges stored within said first end fitting from moisture and preventing the escaping of gas produced from the burning of said RDC and the burning or detonation of said charge stored in said first end fitting.

30. The system of claim 29, said second ferrule being welded to said second end of said first metal tubing of said transfer line providing a hermetic seal protecting the RDC and charges stored within said second end fitting from moisture and preventing the escaping of gas produced from the burning of said RDC and the burning or detonation of said charge stored in said second end fitting.

31. The system of claim 30, said first metal tubing having a center portion in the shape of a coil allowing for over 50,000 flexures while first and second end portions having a second metal tubing encapsulating said first metal tubing, said first ferrule being welded to said second metal tubing at said first end of said transfer line while said second ferrule being welded to said second metal tubing at said second end of said transfer line, said first and said second metal tubings being welded together at both said first and said second ends of said transfer line.

32. The system of claim 28, said second ferrule being glued to said first metal tubing, said second ferrule further comprising a booster charge to produce gases when ignited causing said second ferrule to separate from said first metal tubing.

33. An ordnance energy transfer system, comprising:

a Rapid Deflagration Cord (RDC) extending from a first end and a second end of a transfer line;

a first metal tubing hermetically encapsulating said RDC from said first end to said second end of said transfer line;

a first loaded end fitting disposed at said first end of said transfer line;

a second loaded end fitting disposed at said second end of said transfer line;

a first ferrule connecting said first end of said transfer line to said first loaded end fitting; and

a closure cup having a rim welded to said first ferrule.

34. The system of claim 33, said first ferrule being welded to said first metal tubing at said first end of said transfer line to form a hermetic seal for said RDC and for charges stored in said first loaded end fitting during shelf life, installation and use preventing unwanted moisture from entering the system and preventing gases produced from said system from escaping.

35. The system of claim 34, said first ferrule being surrounded and attached to an annular sealing material that provides a hermetic seal for said loaded first end fitting and said RDC when said first end fitting is installed inside a transfer manifold.